Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-5 and 7-16 are pending in the application, with claim 1 being the independent claim. Claims 1-3 are currently amended. Support for the amendments can be found in the specification at page 5, lines 8-10. Claim 6 has been canceled. Claims 4 and 7-16 are sought to be withdrawn from consideration without prejudice or disclaimer to the matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Election/Restrictions

The Examiner pointed out that a proper restriction in an international application should be examined for "unity of invention" and what "technical features" may be present. Under the "unity of invention" analysis, groups I, VI(a), VI(b) and XI possess unity of invention because all of their respective claims are directed to triazolopyrimidine compounds, a process of making triazolopyrimidine compounds and a method of using them.

U.S. Patent and Trademark Office regulations provide guidance to Examiners in regard to unity of invention:

> (b) An international or a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combination of categories: . . .

> (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; . . .

37 C.F.R. § 1.475(b)(3).

The following example is also provided in Chapter 10 of the International Search and Preliminary Examination Guidelines:

> Claim 1: A method of manufacturing chemical substance X.
> Claim 2: Substance X.
> Claim 3: The use of substance X as an insecticide.
>
> Unity exists between claims 1, 2 and 3. The special technical feature common to all the claims is substance X.

paragraph 10.21, Example 1.

Here, the claims of Groups I, VI(a), VI(b) and XI are directed to triazolopyrimidine compounds, or methods of making or using them. Therefore, Applicants assert that groups I, VI(a), VI(b) and XI have a unity of invention and should be prosecuted together.

Even if the restriction between group I, VI(a), VI(b) and XI were proper, groups VI(a), VI(b) and XI should be rejoined once the Examiner finds that group I is allowable. Under MPEP §821.04, where elected claims are found allowable, withdrawn claims that require all the limitations of an allowable claim will be rejoined and fully examined for patentability. Rejoinder of groups VI(a), VI(b) and XI is respectfully requested. Reconsideration and withdrawal of the Restriction Requirement, and consideration and allowance of all pending claims, are respectfully requested.

Objections to the Specification and Claims

The specification has been amended to contain capitalized trademarks. Claim 3 has been amended to place commas between the various R^1 groups.

Rejections under 35 U.S.C. § 112

Claims 1-3 and 5 have been rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. Applicants respectfully traverse the rejection.

According to the Examiner, claims 1-3 and 5 lack guidance. The Examiner states that there is no reference as to "how to synthesize any compounds that contain an R^2 other than H[.]" Office Action, page 6. Applicants respectfully disagree. Examples 7-9 contain procedures for synthesis of compounds that contain a cyclopropyl group as an R^2 group. Example 4 contains an isopropyl group as an R^2 group. The aminotriazoles of formula (VIII) used in these examples can be prepared by methods known in the art as described in the specification on page 13, line 17-18.

The Examiner states that there is no reference as to how "to synthesize any compounds that contain [] an R^3 other than a substituted pyrimidine." *Id.* Applicants respectfully disagree. For instance, Example 5 contains a pyridyl ring as an R^3 group, Examples 7-8 contain a thiophene ring as an R^3 group, and Example 9 contains a thiazolyl ring as an R^3 group. The G group, as claimed, is limited to an oxygen or $S(O)_n$ with n = 0, 1 or 2.

The Examiner states that "$POCl_3$ has been known to both formylate and chlorinate heterocyclic ring systems." *Id.*, page 7. Applicants respectfully disagree.

Formylation of aromatic rings with $POCl_3$ is applicable only to activated ring systems.[1] The reaction with $POCl_3$ in the instant application is conducted on a 5,7-dihydroxy-triazolopyrimidine compound. The triazolopyrimidine core is a deactivated heteroaryl ring system which would preferentially undergo chlorination instead of formylation. A person of ordinary skill in the art would expect the reaction with $POCl_3$ to exclusively yield the chlorinated product.

Applicants request that the rejection of claims 1-3 and 5 under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-3 and 5 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Worthington, *et al.*, WO 03/039259 ("Worthington"). According to the Examiner, *Worthington* discloses a morpholino or a pyridyl group in the 6 position and a heteroarylthio or hetroaryloxy in the 7-position. Applicants respectfully traverse the rejection in view of the claim amendment presented in this reply.

It would appear that the Examiner intended to say *piperidyl* group, not *pyridyl*, at the 6-position. It would also appear that the Examiner intended to say heteroarylthio or hetroaryloxy at the 5-position instead of the 7-position. Applicants respectfully request clarification of the examiner's statement regarding the pyridyl substituent and the heteroarylthio or hetroaryloxy substituents at the 7 (or 5) position.

The claims in the instant application are directed to a compound of formula:

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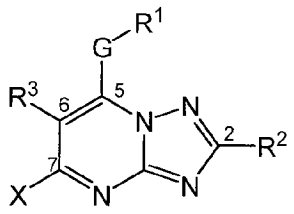
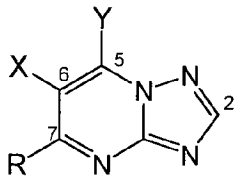
[1] March's Advanced Organic Chemistry, Fifth Edition, page 715, a copy of which is enclosed as Exhibit A.



Worthington describes compounds of formula:



The group X in *Worthington* corresponds to the R^3 group at position 6 in the instant application. The group Y in Worthington corresponds to the G-R^1 group at position 5 in the instant application.

The compounds claimed in the instant application are directed to compounds in which R^3 is an unsaturated heterocycle. By contrast, the group corresponding to R^3 in *Worthington* (the "X" group) is a saturated heterocycle (morpholino or piperidino), or heteroaryloxy or heteroarylthio, i.e., heteroaryl ring attached to the triazolopyrimidine core through an O or S atom. The claimed compounds contain unsaturated heterocycles attached *directly* to the triazolopyrimidine core and are therefore different from the *Worthington* compounds.

Applicants respectfully request that the Examiner reconsider the present rejection and that the rejection be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-3 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Becher *et. al.* (US 5,612,345) ("Becher") in view of *Worthington. Becher* suggests

a phenyl ring at the 6-position. *Worthington* describes a morpholino or piperidino group at the 6-position. The *Worthington* reference also describes heteroarylthio or a heteroaryloxy substituents at the 5-position. The examiner states that "[i]t would have been obvious to one of ordinary skill in the arts at the time of the invention to be motivated to replace the 6-position with a heterocyclyl group like morpholino or piperidino and to replace the 7 [sic, 5]-position with a heteroarylthio or a heteroaryloxy group." Office action, paragraph bridging pages 10 and 11. It would appear that the examiner intended to say replacement of the halogen at the 5-position instead of the 7-position. Applicants respectfully request clarification of the Examiner's statement regarding the substituents at the 7 (or 5) position. Applicants respectfully traverse the rejection in view of the claim amendments presented in this reply.

The R group in *Becher* at position 6 corresponds to the R^3 group in the instant application. *Becher* describes the group corresponding to R^3 in the instant application to be a phenyl ring. Further, the *Becher* disclosure is limited to compounds in which the substituent at position 5 is a halogen. The Examiner states that it would be obvious to one skilled in the art to replace the phenyl substituent at the 6-position with a heterocyle and the halogen substituent at the 5-position with a heteroarylthio or heteroaryloxy group.

First, the Examiner has not articulated a particular reason why one of ordinary skill in the art would have replaced the 6-phenyl substituent of *Becher* with a heterocycle and the 5-halogen substituent of *Becher* with a heteroarylthio or heteroaryloxy group. The general statement that "[i]t would have been obvious to one skilled in the art the time of the invention to be motivated to replace the 6-position with a heterocycyl group

like morpholino or piperidino and also replace the 7[sic, 5]-position with a heteroarythio [sic] or heteroaryloxy group" does not meet the Examiner's burden of establishing a *prima facie* case of obviousness.

Moreover, even if, *arguendo*, the phenyl group at 6-position of *Becher* compounds was replaced by a morpholino, piperidino, heteroaryloxy or heteroarylthio group of *Worthington*, the resultant compounds would not contain an *unsaturated* heterocycle attached *directly* to the triazolopyrimidine core at the 6-position as required by the amended claims of the present invention. Therefore, the Examiner failed to make a *prima facie* case of obviousness. Applicants respectfully request that the rejection be withdrawn.

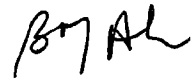
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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